

REMARKS

The Applicant wishes to thank the Examiner for the careful consideration given to the case in the office action mailed January 12, 2004.

In the Office Action, the Examiner has rejected claims 1, 4-10, 31-41, 43 and 44 under 35 U.S.C. Section 103(a), and has asserted that the claims are unpatentable over U.S. Patent No. 3,602,938 to *Lindsay* in view of U.S. Patent No. 5,692,571, to *Jackson*. The Applicant respectfully traverses this rejection. In the present application, each of the independent claims (Claims 1, 31 and 35) requires that the vacuum pump **60** generate a “stable reduced pressure” in vessel **30**. None of the references cited by the Examiner describes a system that generates a stable reduced pressure in a vessel. Rather, *Lindsay* describes an open vacuum pump system that siphons water from an outdoor field. Any lines to which the pump may be connected are drain lines which are not airtight. Such a system would not maintain a stable pressure, but instead would vary depending on whether or not the pump is operating and the amount of water that is flowing through the system. Similarly, *Jackson* describes a building exterior fire protection system. Such an exterior system would also be an open system, with sprinkler heads that are not substantially airtight. Thus, one skilled in the art would not expect the pump of *Lindsay* to generate a stable reduced pressure in a vessel even if applied to the fire protection system of *Jackson*.

In the claims presented herein, pressure stability is required to allow the apparatus to be used with airtight or substantially airtight indoor systems. As explained in the application, if the vacuum pressure is too high inside the pipes of the sprinkler system, the gaskets may be drawn out of the couplings and out of the pipes, thus causing breaches in the pipelines where the pipes are joined. (See, for example, paragraph 0007). Thus, the vacuum pump maintains the pressure at a stable level. The pressure may remain stable even after the pump has been shut off.

To clarify this, applicants have amended claims 1 and 31 to clarify that the stable reduced pressure is a regulated vacuum pressure. Claim 35 is amended to provide a specific example of such regulation (i.e., up to about 10 inches Hg).

Finally, Applicants note that the Examiner has indicated that U.S. Patent No. 3,896,992, to *Borovina et al.*, discloses a pressure gauge and a pressure relief valve. Such items would not be sufficient to generate a stable reduced pressure in a vessel. In other words, they are not items that regulate or maintain the stability of pressure. Instead, they simply allow visual observation of a gauge, to that a valve may be manually opened when desired.

Accordingly, Applicant believes that the claims as amended herein are patentable, and Applicant respectfully requests reconsideration of the rejections set forth in the Office Action.

CONCLUSION

In view of the above amendments and remarks, Applicant believes that the application is in condition for examination and allowance on the merits. The Applicant respectfully requests favorable resolution and looks forward to the Examiner's response.

This response has been timely filed. Accordingly, no fee is required. In the event that a fee is required for this response, the Commissioner is hereby authorized to charge such fees to Deposit Account No. 50-0436.

Respectfully submitted,



James M. Singer
Registration No. 45,111

Pepper Hamilton LLP
One Mellon Center, 50th Floor
500 Grant Street
Pittsburgh, PA 15219
Telephone: (412) 454-5000
Facsimile: (412) 281-0717

Date: April 12, 2004